

**AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APP. NO. 09/648,806**

REMARKS

Summary of the Office action

Claims 1-5 are pending in the application.

Claims 1-3 and 5 are rejected under 35 U.S.C. § 103 as being unpatentable over EP 0 519 498 A2 in view of Lockwood (U.S. Patent 5,532,700 or U.S. Patent 5,251,186) or Clark (U.S. Patent 6,142,942). This rejection is respectfully traversed.

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Analysis of the Rejection of Claims 1-3 and 5

Applicant submits that claims 1-3 and 5 are patentable over the cited references at least because each of the cited references fails to teach or suggest the claimed "orthogonalized infinite impulse response (IIR) filter..." That the finite impulse response filter is orthogonalized contributes to the stability of the output of the filter. There is no teaching, or even suggestion, in any of the applied references of using an orthogonalized infinite impulse response filter.

Furthermore, Applicant respectfully submits that the Examiner has not provided a convincing motivation for combining the applied references. For example, with regard to Lockwood, the Examiner merely states that Lockwood "teaches echo cancellation system wherein an adaptive beamformer can be used in conjunction with other filtering means to reduce echo." With regard to Clark, the Examiner states that this reference "teaches a noise reduction

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APP. NO. 09/648,806

system wherein a beamformer can be used in conjunction with an adaptive filter for noise reduction." And the Examiner concludes that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of either Lockwood or Clark into that of EP '498, thus making it possible to reduce echo or any noise." There is no suggestion, however, in Lockwood or Clark for modifying EP '498 to use an adaptive beamformer comprising an infinite impulse response filter in combination with the orthogonalized infinite impulse response filter as set forth in claim 1.

With regard to claim 2, Applicant submits that the references, alone or in combination, do not teach or suggest the claimed first and second adders. The Examiner generally mentions Fig. 3 of EP '498 in rejecting claim 2, but Fig. 3 of EP '498 does not teach or suggest the claimed first and second adders.

With regard to claim 3, this claim is patentable for the same reasons that claims 1 and 2 are patentable.

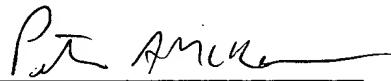
Claim 5 is patentable at least by virtue of its dependence from claim 3.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APP. NO. 09/648,806

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


Peter A. McKenna
Registration No. 38,551

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: September 1, 2005